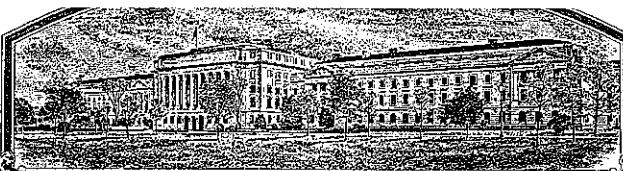


No.

200000316



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

D&P Technology Holding Company, LLC.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'DP 5414 RR'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this ninth day of June, in the year two thousand and four.

Attest:



[Signature]
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

[Signature]
Secretary of Agriculture

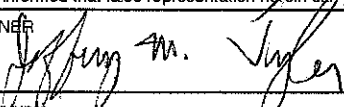
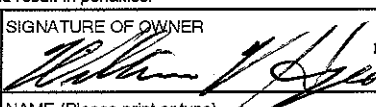
U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

| | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. NAME OF OWNER D&PL Technology Holding Company, LLC. | | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME DPX 5514 RR | | 3. VARIETY NAME DP 5414 RR | |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) PO Box 157 100 Main Street Scott, Mississippi 38772 USA | | 5. TELEPHONE (include area code) (662) 742-4141 | | PVPO NUMBER 200000316 | |
| | | 6. FAX (include area code) (662) 742-3182 | | FILING DATE 1 August, 2000 | |
| 7. IF THE OWNER IS NOT A "PERSON" GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Limited Liability Company | | 8. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware | | 9. DATE OF INCORPORATION February 29, 1996 | |
| 10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Delta and Pine Land Company Kelly Casavechia P.O. Box 157 Scott, MS 38772 | | | | FILING AND EXAMINATION FEE: \$ 2450.00 DATE 8/01/2000 CERTIFICATION FEE: \$ 432.00 DATE 5/12/04 | |
| 11. TELEPHONE (include area code) (662) 742-4141 | | 12. FAX (include area code) (662) 742-3182 | | 13. E_MAIL kelly.h.casavechia@deltaandpine.com | |
| | | | | 14. CROP KIND (Common Name) Soybean | |
| 15. GENUS AND SPECIES NAME OF CROP Glycine Max | | 16. FAMILY NAME (Botanical) LEGUMINOSAE | | 17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | |
| 18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse). a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office) | | | 19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22) | | |
| | | | 20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO | | |
| | | | 21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED | | |
| 22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCE FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO - As of date of original application - 7/31/00 IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.) | | | 23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNE REFERENCE NUMBER. (Please use space indicated on reverse.) | | |
| 24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties. | | | | | |
| SIGNATURE OF OWNER  | | | SIGNATURE OF OWNER  | | |
| NAME (Please print or type) Jeffrey M. Tyler | | | NAME (Please print or type) William V. Hugie | | |
| CAPACITY OR TITLE Soybean Breeder | | DATE 02-04-2004 | | CAPACITY OR TITLE Vice President/Director of Research | |
| | | | | DATE 02-05-04 | |

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (*See Section 97.6 of the Regulations and Rules of Practice* .) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieites, lines, or clones used, and the breeding method
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of realted varieties:
(1) Identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (*See Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

ROUNDUP READY[®] cotton-soybean (per applicant's authorization 2/10/2004 BT)

These seeds are covered under U.S. Patents 5,633,435; 5,352,605; 5,530,196; 5,188,642; 4,940,835; 5,717,084; 5,728,925; and 5,804,425.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (*See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.*)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed/lsg-sd.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U. S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete.

DPL Technology Holding Company, LLC's

Delta and Pine Land's Application for DPX 5514 RR

'DP 5414 RR' (BT: 2/10/2004)

Exhibit A

Origin and Breeding History of the Variety

| | |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SUMMER 1995 | Original cross 95765 made at Scott, Mississippi between DP 3588 and an F ₁ plant from the cross 9584*[DPX 2324*(DPX 2384(2)*40-3-2)]. The line DPX 2324 was selected from A5474*BEDFORD. The line DPX 2384 was selected from DPL 415*DPL 105. |
| WINTER 1995-1996 | F ₁ advanced to F ₂ under lights in Costa Rica. |
| SUMMER-FALL 1996 | F ₂ advanced to F ₄ by the bulk pod method in Costa Rica. |
| WINTER 1996-1997 | F ₄ seed planted and about 200 single plants were selected. |
| SUMMER 1997 | About 200 F ₅ plant rows were grown at Scott, Mississippi and row 95765-14 was found to be uniform and stable for the characteristics listed in Exhibit C of this application. It was selected for apparent yield and general adaptation, based on visual assessment. The plants in row 95765-14 were harvested in bulk and the seeds were sent to Costa Rica for increase. |
| SUMMER 1998 | 95765-14 was yield tested at 9 locations across the southern US. About 10 pounds of seed were sent to Costa Rica for increase. It was advanced on the basis of measured seed yield. |
| SUMMER 1999 | 95765-14 was yield tested at 7 locations across the southern US. Approximately 225 bushels of Foundation seed was produced at Scott, Mississippi. 95765-14 was renamed DP 5414 RR. |
| SUMMER 2000 | DP 5414 RR yield tested at 10 southern US locations and approximately 176 acres were planted for increase. After three years of testing and three generations of seed increase, DP 5414 RR has been observed to be uniform and genetically stable for characteristics listed in Exhibit C of this application. No variants were observed. |

~~D&L Technology Holding Company, LLC's~~
~~DP 5414 RR Plant's Application~~ for DP 5414 RR

Exhibit B

Statement of Distinctness

NOVELTY STATEMENT

To our knowledge, DP 5414 RR most resembles DP 5644 RR. Differences include but are not restricted to the following:

1. Seeds of DP 5414 RR are shiny whereas seeds of DP 5644 RR are dull.
2. Plants of DP 5414 RR are susceptible to race 14 of the soybean cyst nematode whereas plants of DP 5644 RR are resistant.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**EXHIBIT C
(Soybean)**

**OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* (L.) Merr.)**

| | |
|------------------------------------------------------------------|----------------------------------------------------------------|
| NAME OF APPLICANT(S) | FOR OFFICIAL USE ONLY |
| <i>D&P Technology Holding Company, LLC (Bt: 2/10/2004)</i> | PVPO NUMBER <i>200000316</i> |
| ADDRESS (Street and No. or R.F.D. No., City, State and ZIP Code) | VARIETY NAME |
| <i>P.O. Box 157, 100 Main Street Scott, MS 38772 USA</i> | <i>'DP 5414 RR' (Bt: 2/10/04)</i> |
| | TEMPORARY OR EXPERIMENTAL DESIGNATION DPX 5514 RR |

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in the first box (e.g.

| | | |
|---|---|---|
| 9 | 9 | 9 |
|---|---|---|

 or

| | |
|---|---|
| 0 | 9 |
|---|---|

) when number is either 99 or less or 9 or less respectively. Data for quantitative

plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal

Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

A. MORPHOLOGY

Seed Shape:

| | | | |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------|
| <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>2</td></tr></table> | 2 | 1 = Spherical (L/W, L/T, and T/W ratios < 1.2) | 2 = Spherical-Flattened (L/W ratio > 1.2; L/T ratio < 1.2) |
| 2 | | | |
| | 3 = Elongate (L/T ratio > 1.2; T/W ratio < 1.2) | 4 = Elongate-Flattened (L/T ratio > 1.2; T/W ratio > 1.2) | |

Seed Coat Color:

| | | | | | | |
|------------------------------------------------------------------------------------------------------|---|------------|-----------|-----------|-----------|-------------------------------------|
| <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>1</td></tr></table> | 1 | 1 = Yellow | 2 = Green | 3 = Brown | 4 = Black | 5 = Other (Please Specify) _____ |
| 1 | | | | | | |

Seed Coat Luster:

| | | | |
|------------------------------------------------------------------------------------------------------|---|----------|-----------|
| <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>2</td></tr></table> | 2 | 1 = Dull | 2 = Shiny |
| 2 | | | |

Seed Size:

| | | | |
|----------------------------------------------------------------------------------------------------------------|---|---|-----------------|
| <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>1</td><td>4</td></tr></table> | 1 | 4 | grams/100 seeds |
| 1 | 4 | | |

Hilum Color:

1 = Buff 2 = Yellow 3 = Brown 4 = Gray
 6 = Black 7 = Other (Please Specify) _____

200000316
5 = Imperfect Black

Cotyledon Color:

1 = Yellow 2 = Green

Seed Protein Peroxidase Activity:

1 = Low 2 = High

Hypocotyl Color:

1 = Green 2 = Green with Bronze 3 = Light Purple 4 = Dark Purple extending to
 ('Evans' or 'Davis') Bands below Cotyledon below Cotyledons unifoliate leaves ('Hodgson',
 ('Woodworth' or 'Tracy') ('Beeson' or 'Pickett 71') 'Coker', or 'Hampton 266A')

Leaf Shape:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Please Specify) _____

Flower Color:

1 = White 2 = Purple 3 = White with a Purple Throat

Pod Color:

1 = Tan 2 = Brown 3 = Black

Pubescence Color:

1 = Gray 2 = Brown (Tawny) 3 = Light Tawny

Plant Habit:

1 = Determinate 2 = Semi - Determinate 3 = Indeterminate 4 = Intermediate

Maturity Group:

| | | | | | | |
|--------------------------------|--------------------------------|-----------|---------|--------|---------|----------|
| <input type="text" value="0"/> | <input type="text" value="8"/> | 1 = 000 | 2 = 00 | 3 = 0 | 4 = I | 5 = II |
| | | 6 = III | 7 = IV | 8 = V | 9 = VI | 10 = VII |
| | | 11 = VIII | 12 = IX | 13 = X | 14 = XI | 15 = XII |

Maturity Subgroup:

Please enter a value from 0 - 9

B. DISEASE REACTIONS

0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Bacterial

Bacterial Pustule (*Xanthomonas campestris* pv. *glycines* (Nakano) Dye)

Bacterial Blight (*Pseudomonas syringae* pv. *glycinea* (Coerper) Young, Dye, & Wilkie)

Wildfire Blight (*Pseudomonas syringae* pv. *tabaci* (Wolf & Foster) Young, Dye, & Wilkie)

Fungal

200000316

0

Brown Spot (*Septoria glycines* Hemmi)Frogeye Leaf Spot (*Cercospora sojina* Hara)

0

race 1

0

race 2

0

race 3

0

race 4

0

race 5

0

race 6

0

Other (Please Specify) _____

0

Target Spot (*Corynespora cassiicola* (Berk. & Curt.) Wei)

0

Downey Mildew (*Peronospora trifoliorum* var. *manchurica* (Naum.) Syd. ex Gäum)

0

Powdery Mildew (*Microsphaera diffusa* Cke. & Pk.)

0

Brown Stem Rot (*Phialophora gregata* (Allington & Chamberlain) W. Gams.)

2

Stem Canker (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *caulivora* Athow & Caldwell)

0

Pod and Stem Blight (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *sojae* (Lehman) Wehm.)

0

Purple Seed Stain (*Cercospora kikuchii* (T. Matsu. & Tomoyasu) Gardener)

0

Rhizoctonia Root Rot (*Rhizoctonia solani* Kühn)Phytophthora Root Rot (*Phytophthora megasperma* Drechs. f. *sp. glycinea* (Kuan & Erwin))

0

race 1

0

race 8

0

race 15

0

race 22

0

race 2

0

race 9

0

race 16

0

race 23

0

race 3

0

race 10

0

race 17

0

race 24

0

race 4

0

race 11

0

race 18

0

race 25

0

race 5

0

race 12

0

race 19

0

race 26

0

race 6

0

race 13

0

race 20

0

Other (Please Specify)

0

race 7

0

race 14

0

race 21

0

Bud Blight (Tobacco Ringspot Virus)

0

Yellow Mosaic (Bean Yellow Mosaic Virus)

B. DISEASE REACTIONS (*Continued*) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

200000316

Cowpea Mosaic (Cowpea Chlorotic Virus)

Pod Mottle (Bean Pod Mottle Virus)

Seed Mottle (Soybean Mosaic Virus)

Nematode

Soybean Cyst Nematode (*Heterodera glycines* Ichinohe)

| | | |
|---------------------------------------|---------------------------------------|----------------------------------------------------------------------|
| <input type="text" value="0"/> race 1 | <input type="text" value="0"/> race 4 | <input type="text" value="0"/> race 9 |
| <input type="text" value="0"/> race 2 | <input type="text" value="0"/> race 5 | <input type="text" value="1"/> race 14 |
| <input type="text" value="2"/> race 3 | <input type="text" value="0"/> race 6 | <input type="text" value="0"/> Other (<i>Please Specify</i>) _____ |

Lance Nematode (*Hoplolaimus columbus* Sher)

Southern Root Knot Nematode (*Meloidogyne incognita* (Kofoid & White) Chitwood)

Northern Root Knot Nematode (*Meloidogyne hapla* Chitwood)

Peanut Root Knot Nematode (*Meloidogyne arenaria* (Neal) Chitwood)

Reniform Nematode (*Rotylenchus reniformus* Linwood & Olivera)

Javanese Nematode (*Meloidogyne javanica* (Treub) Chitwood)

Other Nematode (*Please Specify*) _____

C. PHYSIOLOGICAL RESPONSES 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Iron Chlorosis on Calcareous Soil

Phosphorus Other (*Please Specify*) _____

Boron

Aluminum

Salt

Drought

D. INSECT REACTIONS 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

- Mexican Bean Beetle (*Epilachna varivestis* Mulsant)
- Potato Leaf Hopper (*Empoasca fabae* (Harris))
- Other (Please Specify) _____

E. HERBICIDE REACTIONS 0 = Not Tested 1 = Susceptible 2 = Resistant

- Metribuzin
- Bentazone
- Sulfonylurea
- Glyphosate
- Glufosinate
- Pendimethalin
- Other (Please Specify) _____

F. TRANSGENIC COMPOSITION

Has the development of the subject variety included the insertion of genetic material from an organism other than a soybean, or, the removal of genetic material from the application variety?

If yes, please complete the following information requests*. Use additional pages if necessary. ☒ YES ☐ NO

1. Please state the vector's name:
2. Please state the vector components:
3. Please describe the genetic material successfully transferred into the subject variety:
4. Please describe the insertion protocol:

* A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the "Transgenic Composition" portion of this form.

DPX 5514 RR is a Roundup Ready™ variety derived from the Monsanto transformant 40-3-2. Please see Crop Science 35:1451-1461 (1995).

G. BIOCHEMICAL MARKERS

Please describe any biochemical information here, which you believe will be helpful in further describing the subject variety (e.g. Simple Sequence Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

H. COMMENTS

~~D&P Technology Holding Company, LLC's~~
~~Delta and Pine Land's~~ Application for DPX 5514 RR
 (BT:2/10/2004)

Exhibit D

Additional Description of the Variety

ADDITIONAL DESCRIPTION

~~DP 5414 RR' (BT:2/10/04)~~

DPX 5514 RR is an F_4 selection composited in the F_5 generation from the cross DP 3588*[9584*(DPX 2324*(DPX 2384(2)*40-3-2. It is a Roundup Ready™ variety of mid-Group V maturity and is being released because of its superior yield performance across southern US environments. Plants of DPX

~~DP 5414 RR' (BT:2/10/04)~~ 5514 RR are medium-tall with white flowers, tawny pubescence, and tan podwalls at maturity. Seeds of DPX 5514 RR are shiny with black hila. ~~DP 5414 RR' (BT:2/10/04)~~ DPX 5514 RR is resistant to southern stem canker, race 3 of soybean cyst nematode, and susceptible to root knot nematodes.

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Deltapine Seed

Soybean Product Nomination Form

'DP 5414 RR' (BT: 2/10/2004)

<DPX 5514 RR>

C. TINIUS
Soybean Project Leader
December, 1999

PRODUCT SUMMARY SHEET

KEY FEATURES

Very good yield potential
 Resistant to stem canker
 Good resistance to SCN race 3

PRODUCT DESCRIPTION

| Trait | Phenotype |
|-----------------------|---------------------------|
| Relative maturity | 5.5 |
| Roundup Ready™ | Yes |
| STS® | No |
| Flower color | White |
| Pubescence color | Tawny |
| Hilum color | Black |
| Podwall color | Tan |
| Seed size | 3000/lb |
| Seed protein | 36.0% |
| Seed oil | 18.3% |
| Peroxidase reaction | Positive |
| Seedcoat luster | Shiny |
| Hypocotyl color | Bronze |
| Seed shape | Spherical flattened |
| Leaflet size | Medium |
| Leaflet color | Medium green |
| Canopy | Intermediate |
| Growth habit | Determinate |
| SCN race 3 | Resistant |
| SCN race 14 | Susceptible |
| Common root knot | Untested - Susceptible |
| Peanut root knot | Untested (per applicant's |
| Javanese root knot | Untested authorization |
| Lance nematode | Untested 2/10/2004 BT) |
| Frogeye leafspot | Untested |
| Sudden death | Untested |
| Stem canker | Resistant |
| Phytophthora root rot | Untested |
| Red crown rot | Untested |
| Chloride tolerance | Untested |
| Aerial Blight | Susceptible |

BREEDER'S SUBJECTIVE RATINGS

| | |
|----------------------|-----------|
| Field emergence | Excellent |
| Early vigor | Excellent |
| Narrow rows | Good |
| Wide rows | Good |
| No-till | Excellent |
| Late planting | Good |
| Poorly-drained soils | Excellent |
| Shatter resistance | Excellent |

PRODUCT IDENTITY

Line selected by: Dr. Grover Shannon
 Former designation: 95765-14
 Pedigree: DP 3588*93265F₁
 93265F₁=P9584*[DPX 2324*(DPX 2384(2)*40-3-2)]
 DPX 2324 selected from A5474*BEDFORD
 DPX 2384 selected from DPL 415*DPL 105
 Areas of adaptation: Midsouth
 Replace: DP 5644 RR
 Complement: DP 5655
 Main competition: AG 5602
 Most similar line: DP 5644 RR

YIELD HISTORY

Outyielded DP 5644 RR by 2% in 11 Midsouth trials
 Yield rank was 3/12 over 7 locations in 1999
 Yield rank was 13/48 over 9 locations in 1998

KNOWN WEAKNESSES

Susceptible to SCN race 14

SEED STOCK STATUS

227 bushels Foundation seed

ADDITIONAL DESCRIPTION

Offtypes of each of the following traits may be exhibited in up to 1% of the plants of this variety: flower color, pubescence color and hila color.

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'DP 5414 RR'
<DPX 5514 RR> (BT: 2/10/2004)
 PRODUCT PERFORMANCE

Combined data, all locations 1998-1999

| | YIELD | | MAT | HGT | LDG |
|-------------------------------------------------------------------|-------|-------|------|------|-----|
| | bu/ac | %5644 | | | |
| (BT: 2/10/2004) 'DP 5414 RR' <DPX 5514 RR> | 53.9 | 102 | -1.8 | 31.4 | 1.8 |
| DP 5644 RR | 53.0 | 100 | 0 | 28.8 | 1.8 |
| Locations | 16 | | 9 | 18 | 16 |

Data by region

Midsouth, all locations, 1998-1999

| | YIELD | | MAT | HGT | LDG |
|-------------------------------------------------------------------|-------|-------|------|------|-----|
| | bu/ac | %5644 | | | |
| (BT: 2/10/2004) 'DP 5414 RR' <DPX 5514 RR> | 53.2 | 104 | -2.9 | 29.3 | 1.8 |
| DP 5644 RR | 51.0 | 100 | 0 | 26.6 | 1.7 |
| Locations | 11 | | 5 | 13 | 13 |

Southeast, all locations, 1998-1999

| | YIELD | | MAT | HGT | LDG |
|-------------------------------------------------------------------|-------|-------|------|------|-----|
| | bu/ac | %5644 | | | |
| (BT: 2/10/2004) 'DP 5414 RR' <DPX 5514 RR> | 55.5 | 97 | -0.4 | 36.8 | 1.7 |
| DP 5644 RR | 57.3 | 100 | 0 | 34.4 | 2.2 |
| Locations | 5 | | 4 | 5 | 3 |

In 4/16 research trials, **'DP 5414 RR'** (BT: 2/10/2004) **<DPX 5514 RR>** has exceeded the mean yield of the trial by 10% or greater.

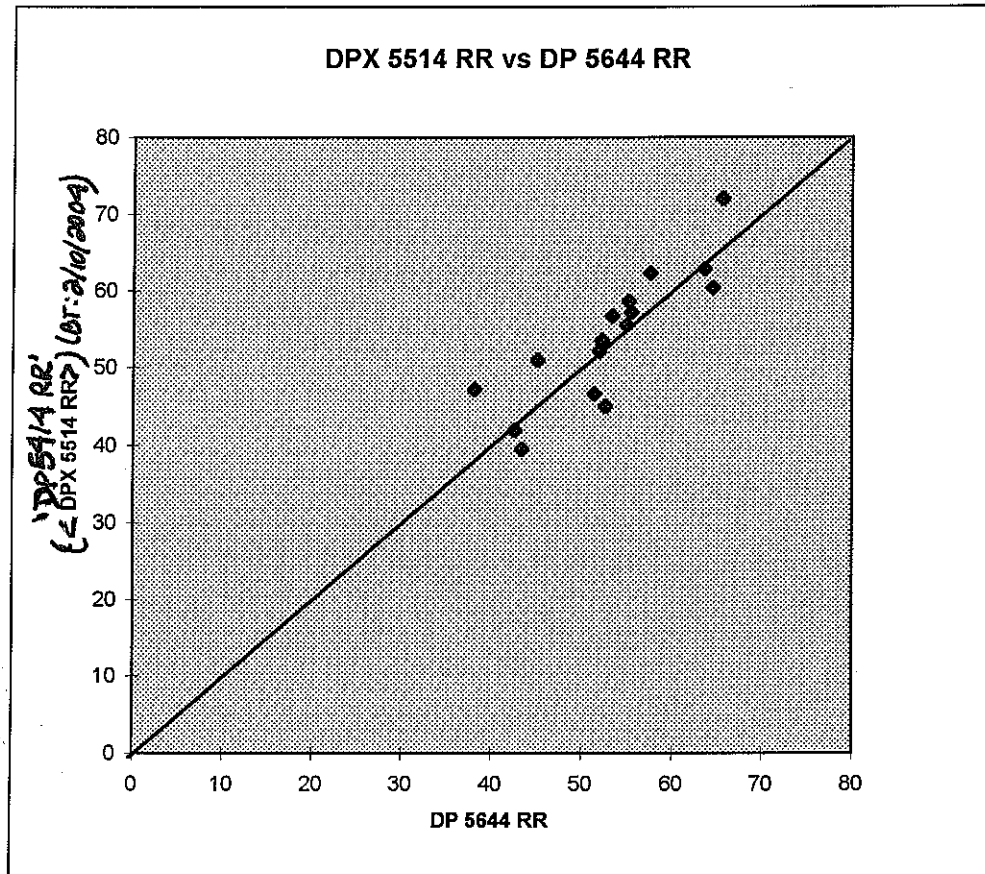
In 7/16 research trials, **'DP 5414 RR'** (BT: 2/10/2004) **<DPX 5514 RR>** has been among the top 1/3 of entries for yield.

In 1/16 research trials, **'DP 5414 RR'** (BT: 2/10/2004) **<DPX 5514 RR>** has been the highest-yielding entry in the trial.

'DP 5414 RR'
<DPX 5514 RR> (BT: 2/10/2004)

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'DP 5414 RR' (BT: 2/10/2004)
 < DPX 5514 RR >
 PRODUCT PERFORMANCE



This scattergram depicts the head-to-head performance of DPX 5514 RR against DP 5644 RR in 16 research trials conducted during 1998 and 1999. The axes are graduated in bushels/acre, and a point indicates the yields of the two varieties at a given environment. DPX 5514 RR has out-yielded DP 5644 RR 10/16 times.

'DP 5414 RR' (BT: 2/10/2004)
 < DPX 5514 RR >

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'DP 5414 RR' (BT: 2/10/04)
<DPX 5514 RR>

DISEASE REACTION DOCUMENTATION

Soybean Cyst Nematode (*Heterodera glycines*)

Data from Dr. Lawrence Young, USDA, Jackson, Tennessee

| (BT: 2/10/04) (BT: 2/10/04) | Line | Race 3 | Race 14 |
|--------------------------------|-------------|--------|---------|
| | | Score | Score |
| <DPX 5514 RR> (BT: 2/10/04) | DPX 5514 RR | 1.4 | 4.6 |
| | HUTCHESON | 5.0 | --- |
| | CENTENNIAL | 1.7 | 4.4 |

Scale: 1= 0 to 5 females/plant, 2= 6 to 10, 3= 11 to 20, 4 = 21-40, 5 = more than 40 females/plant

Stem Canker (*Diaporthe phaseolorum* (Cooke & Ellis) Sacc. f. sp. *meridionalis* (Morgan-Jones)

Data from Dr. Grover Shannon, Deltapine Seed, Scott, Mississippi

| 'DP 5414 RR' (BT: 2/10/04) | Line | 1999 |
|-----------------------------|-------------|-------|
| | | Score |
| <DPX 5514 RR> (BT: 2/10/04) | DPX 5514 RR | 1.0 |
| | DP 5644 RR | 1.0 |

Scale: 1= no symptoms, 5= very severe symptoms

'DP 5414 RR'
<DPX 5514 RR> (BT: 2/10/2004)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paper Reduction Act (PRA) of 1995.

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

| | | |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------|
| 1. NAME OF APPLICANT(S) D&PL Technology Holding Corp <i>Company, LLC</i> (BT: 2/10/2004) | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER DPX 5514 RR | 3. VARIETY NAME <i>'DP 5414 RR'</i> (BT: 2/10/04) |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) P.O. Box 157 Scott, Mississippi 38772 USA | 5. TELEPHONE (Include area code) 662-742-4141 | 6. FAX (Include area code) 662-742-3182 |
| | | 7. PVPO NUMBER <i>200000316</i> |

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block.
If no, please explain.☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. National or a U.S. based company?
If no, give name of country☒ YES ☐ NO

10. Is the applicant the original owner?

☒ YES ☐ NO

If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

DPX 5514 RR contains a proprietary gene, patented by the Monsanto Company and licensed to D&PL, which encodes a protein which provides tolerance to glyphosate herbicide in soybean cultivars.

Please Note:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

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STD-470-E (07-97) (*Destroy previous editions*). Electronic version designed using WordPerfect InForms by USDA-AMS-IMB.

D&PL Technology Holding Company, LLC's
~~Delta and Pine Land's Application for DPX 5514 RR7~~
DP5414 RR' (BT: 2/10/2004)

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Exhibit E

Statement of the Basis of Ownership

DP 5414 RR' (BT: 2/10/2004)
DPX 5514 RR' originated from crosses made by employees of the Research Department of Delta and Pine Land Company (D&PL). Work product of these employees is the property of D&PL. D&PL has assigned all of its rights as owner of DPX 5514 RR' to its wholly owned subsidiary, D&PL Technology Holding Corp.
DP 5414 RR' (BT: 2/10/2004)

DP 5414 RR' (BT: 2/10/2004)
DPX 5514 RR' contains a proprietary gene, patented the Monsanto Company and licensed to D&PL, which encodes a protein which provides tolerance to glyphosate herbicide in soybean cultivars.